



Building a better
working world

EY Discovery Analytics

Empowering technology to
transform data into action

Finding your needle in a large stack of digital information

As organizations and their employees change the way they share and store information, digital forensics and data discovery procedures must also evolve to create meaningful relationships from within and across voluminous and varied data sets thereby providing case insight and intelligence. EY Discovery Analytics (EYDA) helps organizations meet these challenges through technology innovation and custom work flows, bringing efficiency and increased precision to every stage of the discovery process. It can be applied to each phase of your matter, from collection validation and gap analysis, early case assessment, data processing, document review, production, depositions, evidentiary hearings, to trial preparation.

EY in action



Cross-border, multilingual investigation into financial accounting issues

A global manufacturing company engaged EY to investigate possible accounting irregularities, spanning multiple countries in three languages. The team applied language identification to sort 2.39 million documents by primary language and then used predictive coding technology on each language subset separately. By training the automated predictive coding system with a combination of random samples and targeted searches focusing on key events and central actors, we identified 45,000 potentially relevant documents and used statistical analysis to determine that the remaining 2.345 million documents were non-relevant with a specific level of confidence.



Social network analysis supporting fraud investigation

While supporting a fraud investigation focused on senior executives, EY utilized advanced analytics technologies to identify opportunities for individuals to have conspired in person. Our team used emotive tone and social network analysis to characterize personal relationships between executives and identify other relevant connections. EY used foreign language identification to review multilingual suspects' emails, since language-switching was possibly a part of a secrecy strategy. Finally, we extracted time, date, location and actor information from unstructured and structured data sources, including T&E reports, browser history and personal emails to create a comprehensive map of each suspect's location over time.



Marrying unstructured data and structured data in regulator response

EY was engaged by a financial services firm to review its process for generating 10 billion trade confirmations across multiple platforms and recordkeeping systems over a one-year period. Due to volume, manual review was impractical. Using custom analytics algorithms, trained and refined by counsel over time, the EY team connected structured financial data to associated confirmation correspondence delivered via emails or physical letters. More than 1.4 billion records were included in the reconciliation. The data formats included structured financial data, semi-structured transmission data and unstructured text strings, which required significant parsing and normalization using various analytics methods. With EY's help, the firm demonstrated to a regulator that it had conducted a comprehensive, fact-based reconciliation exercise involving all transactions on its trading platforms by the required deadline.



Key features of EYDA

Reliability and transparency

EYDA is attorney-driven computing. It incorporates the professional judgment of counsel who fine-tune machine learning algorithms, enabling partial automation of the review process. Interactive dashboards allow counsel to refine analytics. EYDA provides a transparent audit trail that traces every coding decision back to individual users.

Customized approach

We always start by assessing the needs of the organization or a specific matter to determine the appropriate mix of analytics and workflow. Based on years of experience working on a wide range of matters, we have accumulated libraries of tested and proven analytics that we can modify for each engagement. This customized approach helps our clients leverage analytics technologies to their maximum effect.

Making informed decisions early in the process

EYDA can help you understand key facts early in the discovery process, enabling you to assess legal and regulatory risks and fine-tune your discovery strategy. This can result in time and cost savings and also help organizations effectively anticipate and mitigate future risks.

Time, cost and resource efficiency

Through automation governed by human intervention, EYDA can process large volumes of data, find relevant information and produce it quickly, saving time and money. EYDA creates reusable knowledge stores with linguistic rules that allow for continuous and ongoing improvement, which may be leveraged in future litigation.

Experienced team

Our professionals are experienced discovery project managers, data scientists and litigation technology professionals accustomed to working closely with companies and outside counsel on complex discovery engagements. Our data scientists leverage new technological innovations and their application to client engagements.

Key analytics technologies EYDA utilizes:

- ▶ Technology-assisted review
- ▶ Predictive coding
- ▶ Concept searching, clustering and topic modeling
- ▶ Named entity recognition
- ▶ Natural language processing
- ▶ Keyword expansion
- ▶ Social networking analysis
- ▶ Email, chat and mobile message threading
- ▶ Near-duplicate identification
- ▶ Foreign language identification
- ▶ Sentiment analysis and emotive tone
- ▶ Audio analytics
- ▶ Data visualization and dashboards

EY | Assurance | Tax | Transactions | Advisory

About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

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About EY's Fraud Investigation & Dispute Services (FIDS)

Dealing with complex issues of fraud, regulatory compliance and business disputes can detract from efforts to succeed. Better management of fraud risk and compliance exposure is a critical business priority – no matter the size or industry sector. With over 4,500 fraud investigation and dispute professionals around the world, we will assemble the right multidisciplinary and culturally aligned team to work with you and your legal advisors. We work to give you the benefit of our broad sector experience, our deep subject matter knowledge and the latest insights from our work worldwide.

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